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|     |  |        |
|-----|--|--------|
| 1   | MKDVESGRVLLNSAAARGDGLLLGLGTRAAATLGGGGGLRESRRGKQGARMSSLLGKPLSYTSSQSCRRNVKYRRVQNYL   | kcnq5- |
| 1   | MKDVESGRVLLNSAAARGDGLLLGLGTRAAATLGGGGGLRESRRGKQGARMSSLLGKPLSYTSSQSCRRNVKYRRVQNYL   | kcnq5- |
| 81  | YNVLERPRGWAFIYHAFVLLVFGCLILSVFSTIPEHTKLASSCLLILEFVMIVVFGLEFIIRIWSAGCCCRYRGWQGRLL   | kcnq5- |
| 81  | YNVLERPRGWAFIYHAFVLLVFGCLILSVFSTIPEHTKLASSCLLILEFVMIVVFGLEFIIRIWSAGCCCRYRGWQGRLL   | kcnq5- |
| 161 | RFARKPFCVIDTIVLIASIAVVSATQGNIFATSALRSRFLQILRMVRMDRRGGTWKLLGSSVYAHSKELITAWYIGFL     | kcnq5- |
| 161 | RFARKPFCVIDTIVLIASIAVVSATQGNIFATSALRSRFLQILRMVRMDRRGGTWKLLGSSVYAHSKELITAWYIGFL     | kcnq5- |
| 241 | VLIFSSFLVYLVEKDANKEFSTYADALWWTITLTTIGYGDKTPLTWLGRLLSAGFALLGISFFALPAGILSGFEALKVQ    | kcnq5- |
| 241 | VLIFSSFLVYLVEKDANKEFSTYADALWWTITLTTIGYGDKTPLTWLGRLLSAGFALLGISFFALPAGILSGFEALKVQ    | kcnq5- |
| 321 | EQHRQKHFEKRRNPAANLIQCVWRSYAADEKSVSIATWKPHLKALHTCSPTKKEQCEASSSQKLSFKERVRMASPRGQSI   | kcnq5- |
| 321 | EQHRQKHFEKRRNPAANLIQCVWRSYAADEKSVSIATWKPHLKALHTCSPTN-----QKLSFKERVRMASPRGQSI       | kcnq5- |
| 401 | KSRQASVGDRRSPSTDITAEGSPTKVQKSWSFNDRTRFRPSLRKSSQPKPVIDADTALGTDDVYDEKGCQCDVSVEDLT    | kcnq5- |
| 392 | KSRQASVGDRRSPSTDITAEGSPTKVQKSWSFNDRTRFRPSLRKSSQPKPVIDADTALGTDDVYDEKGCQCDVSVEDLT    | kcnq5- |
| 481 | PPLKTVIRAIRIMKFHVAKRRRKETLRPYDVKDVIQYSAAGHLDMLCRIKSLQTRVDQILGKGQITSDKKSREKITAHE    | kcnq5- |
| 472 | PPLKTVIRAIRIMKFHVAKRRRKETLRPYDVKDVIQYSAAGHLDMLCRIKSLQTRVDQILGKGQITSDKKSREKITAHE    | kcnq5- |
| 561 | TTDDL SMLGRVVKVEKQVQSI ESKLCLLDIYQQVLRKGSASALALASFQIPPFCEQTSQSPVDSKDLSGSAQNSGC     | kcnq5- |
| 552 | TTDDL SMLGRVVKVEKQVQSI ESKLCLLDIYQQVLRKGSASALALASFQIPPFCEQTSQSPVDSKDLSGSAQNSGC     | kcnq5- |
| 641 | LSRSTSANISRGLQFILT PNEFSAQT FYALSPTMHSQATQVPISQSDGSAVAATNTIANQINTAPKPAAPTTLQIPPLP  | kcnq5- |
| 632 | LSRSTSANISRGLQFILT PNEFSAQT FYALSPTMHSQATQVPISQSDGSAVAATNTIANQINTAPKPAAPTTLQIPPLP  | kcnq5- |
| 721 | AIKHLPRPETLHPNPAGLQESISDVTTCLVASKENVQVAQSNLT KDRSMRKS FDMGGETLLSVCMPVPKDLGKSLSVQNL | kcnq5- |
| 712 | AIKHLPRPETLHPNPAGLQESISDVTTCLVASKENVQVAQSNLT KDRSMRKS FDMGGETLLSVCMPVPKDLGKSLSVQNL | kcnq5- |
| 801 | IRSTEELNIQLSGSESSGRSQDFYFPKWRESKLFITDEEVGPEETETDTFDAAPQAREAAAFASDSLRTGRSRSSQSIC    | kcnq5- |
| 792 | IRSTEELNIQLSGSESSGRSQDFYFPKWRESKLFITDEEVGPEETETDTFDAAPQAREAAAFASDSLRTGRSRSSQSIC    | kcnq5- |
| 881 | KAGESTDALSLPHVKLK  | kcnq5- |
| 872 | KAGESTDALSLPHVKLK  | kcnq5- |

FIG. 1.

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1 MKDVEGRCVLLNSAARAGDGLILGTRAATIGGGGGLRESRRKQQAARMSLLGKPLS---YTSQSQR---NVK kcnq5.PR  
 1 MVQ-KSPNGGVYPCPSGEEKLKVGFGLDPGAPDSTRDQALLIAGSEAPKRGSIILSKPRAG-CACAGKPPKNAF----- fiKCNQ2.PR  
 1 MAEAPPRRLGLGPPGDAFRAELVALTAVQSEQEAGGGGSPRRRLGLISPLPP-CAPLPGSGSGSACGQRSSAAHKR fiKCNQ4.PR  
 73 YRRVQNYLYNVLERPRGWAFFIYHAEVFLVFCCLILSVFSTIPEHTKLASSCLLILEFVMIVVFGLEFIIRIWSAGCCCR kcnq5.PR  
 74 YNKLQNFLYNVLERPRGWAFFIYHAEVFLVFCCLVSVFSTIKEYEKSSEGALVILEIVTIVVFGVEYEVIRIWSAGCCCR fiKCNQ2.PR  
 80 YRRLQNWYNVLERPRGWAFFIYHAEVFLVFCCLVSVFSTIJOEHOELANECCLLILEFVMIVVFGLEYIVRWSAGCCCR fiKCNQ4.PR  
 153 YRGWQRLRFARKPFCVIDILVLIASIAVSAKTOGNI FATSALRSRFLQILRMVMDRRGGTWWKLLGSSVVAHASKELI kcnq5.PR  
 154 YRGWQRLRFARKPFCVIDIMVLIASIAVLAAGSQGNVFATSALRSRFLQILRMVMDRRGGTWWKLLGSSVVAHASKELI fiKCNQ2.PR  
 160 YRGWQRLRFARKPFCVIDIFVFAVAVIAAGTOGNI FATSALRSRFLQILRMVMDRRGGTWWKLLGSSVVAHASKELI fiKCNQ4.PR  
 233 TAWYIGFLVLIESFLVYIVLEKDKANKEFSTYADALWWGTITLTITIGYGDKTPLTWLGRLLSAGFALLGISFFALPAGILG kcnq5.PR  
 234 TAWYIGFLVLIESFLVYIVLEKDKANKEFSTYADALWWGTITLTITIGYGDKTPLTWLGRLLSAGFALLGISFFALPAGILG fiKCNQ2.PR  
 240 TAWYIGFLVLIESFLVYIVLEKDKANKEFSTYADALWWGTITLTITIGYGDKTPLTWLGRLLSAGFALLGISFFALPAGILG fiKCNQ4.PR  
 313 SGFALKVQEQHQHFKERRNPAAANLIQCVWRSYAAD-EKSVSIATW-----KPHLKA- kcnq5.PR  
 314 SGFALKVQEQHQHFKERRNPAAANLIQCVWRSYAAD-EKSVSIATW-----KPHLKA- fiKCNQ2.PR  
 320 SGFALKVQEQHQHFKERRNPAAANLIQCVWRSYAAD-EKSVSIATW-----KPHLKA- fiKCNQ4.PR  
 365 TH-----TCSPTKKEQGEASSQRLSFAERVRMASP-RGQSIKSRQASVGDRRSPSTDLTAEG-SP kcnq5.PR  
 393 LAFRKDPPEPS------QKVSILKDRV-FSSPRGVAAGKGSPOACTVRRSPSADQSLED-SP fiKCNQ2.PR  
 397 LEVRRAEVPPDGAPSRYPVATCHRPGSTSFCPGESSRMGIKDRIRMGSSQRRTGPKSQOIAFPPTMPTSPSSEVGEATSE fiKCNQR.PR  
 424 TKVQKSWSFNDRTFRFESRLKSSQPKVIDADTAIGTDDVMDKGCQCQDVSEDLTPPLKTVIRAIRIMKFLVAKRKEK kcnq5.PR  
 450 SKVFKSWSFNDRTFRFESRLKSSQPKVIDADTAIGTDDVMDKGCQCQDVSEDLTPPLKTVIRAIRIMKFLVAKRKEK fiKCNQ2.PR  
 477 TKVQKSWSFNDRTFRFESRLKSSQPKVIDADTAIGTDDVMDKGCQCQDVSEDLTPPLKTVIRAIRIMKFLVAKRKEK fiKCNQ4.PR  
 504 ETLRPYDVKDVIQYSAGHLDMLCRISLQTRVDQILGKQITSDDKSKREKIT---AEHFTTDDLMLGRVVVKVEKQVQS kcnq5.PR  
 529 ETLRPYDVKDVIQYSAGHLDMLCRISLQTRVDQIVGRGPAITDKDR---TKGPAAELPEDPSMMGRGLGKVEKQVLS fiKCNQ2.PR  
 551 ETLRPYDVKDVIQYSAGHLDMLCRISLQTRVDQIVGRGP-GDRKAREKDGKGSDAEVVDISIMMGRVVVKVEKQVQS fiKCNQ4.PR

FIG. 2

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581 IESKLDCLIDITYQVLRKGSASAIASFQFPEFECEQTSDYQSPVDSKDLGSAQNSGQLSRSTSANISRGQLQFILTPN kcnq5.PR
605 MEKKLDLFLVNIYMQ--RMGIPPTETETAYEGAK--EPEPAPPYHSHEDSRE--HVDRHGQIVKIVRSSSSHG-----QK
629 IEHKLDLILIGFYSRCLRSCTSASLG--AVQVLEDEDTTSDYHSPVDHEDISVSAQT-----fiKCNQ4.PR

661 EFSAQTFYALSPTMHSQATQVPISSQSDGSAAVAANTIANQINTAPKPAAPTTLQTPPPLPAIDHPPRPETLHPNPAGLQE kcnq5.PR
672 NESAP---PAAEPVQCPSTSWQPPQSHPRQGHGUSPVGDH-----GSLVRIPPPAPHERSLSAYGGGNRASMEFL- fiKCNQ2.PR
684 -----fiKCNQ4.PR

741 SISDVTTCLVASKENVQVAQSNITKDRSMRKSFDMGGEITLSVCEPMVPKDTGKSLQSVQNLIRSTEEFNIIQISGSESSGSR kcnq5.PR
739 ROEDTPGQ-----RPPEGTL-----RSDTISISIPSVDDHEELERSHSGFSISQSKENLD-ALNSCYAAVAP fiKCNQ2.PR
684 -----LSISRSVSTNM-----fiKCNQ4.PR

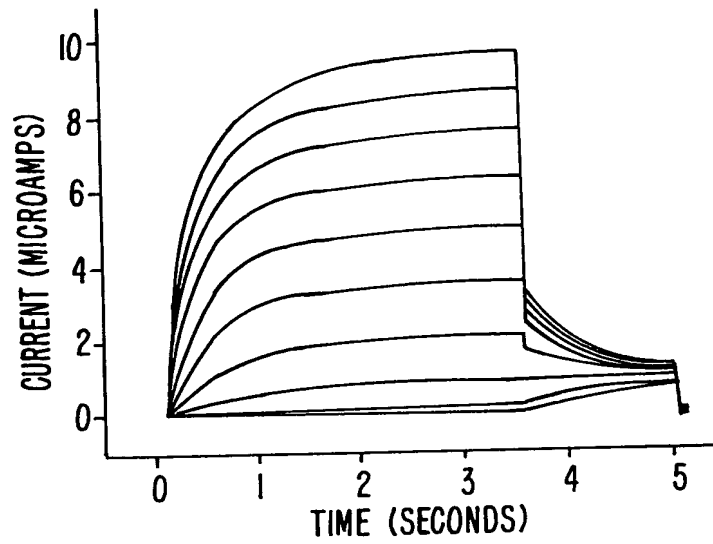
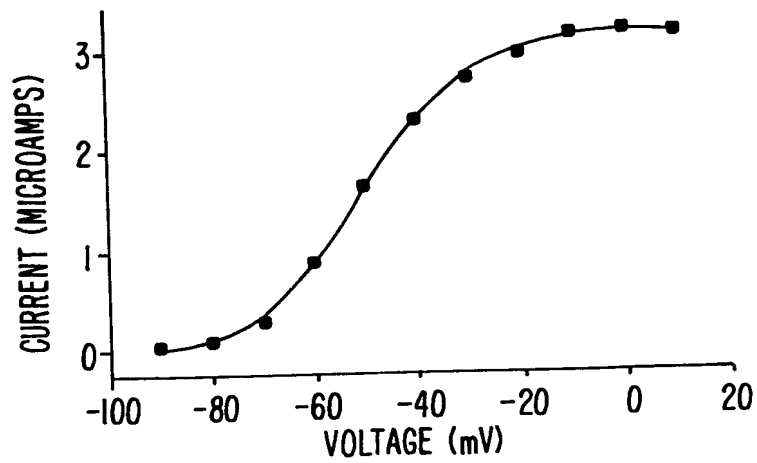
821 GSQDFYPKWRESKLFITDEEVGPEETETDTFDAAPQAFAREAAAFASPSLRTGRSRSSQSIKAGESTDALSPLPHVKLK. kcnq5.PR
799 CAK-----VRPYIAEGESDTSDDLCTPCGPPERSATGEGPFGDVGWAGPRK fiKCNQ2.PR
695 -----D-----fiKCNQ4.PR

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FIG. 2

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*FIG. 3A.**FIG. 3B.*

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KCNQ5

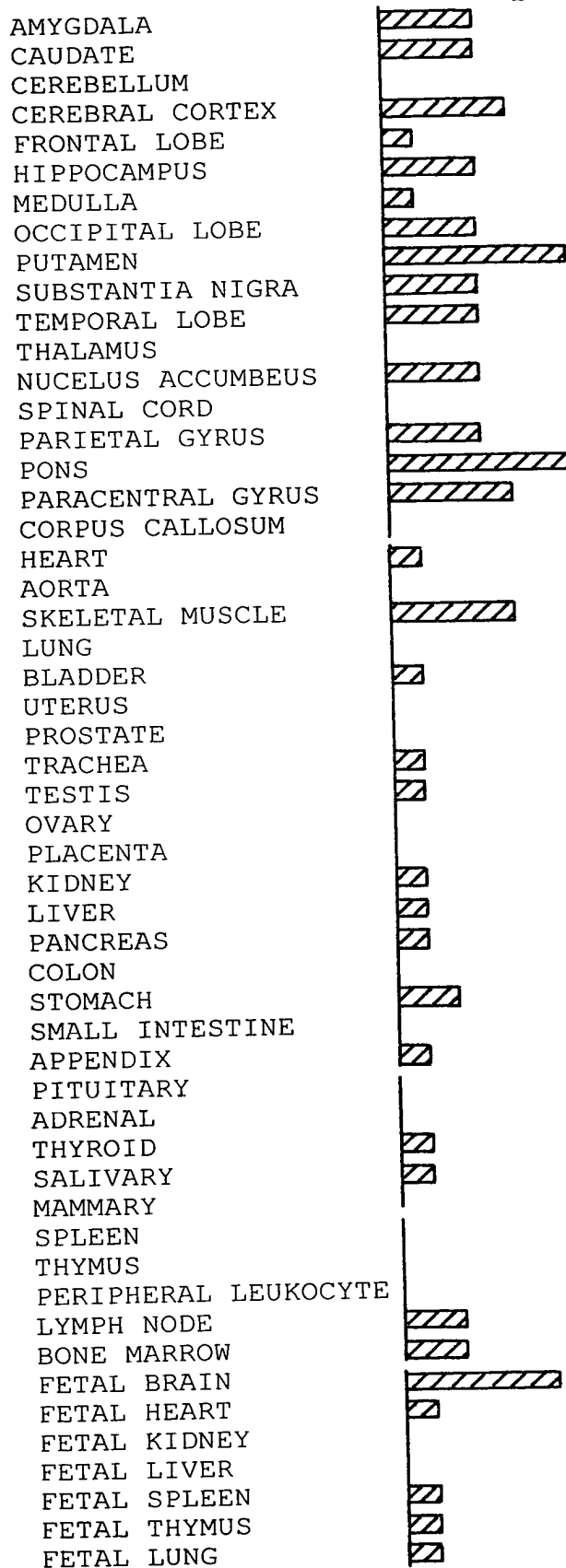


FIG. 4.